

Improvements and variations may be easily made by the instructor. I preferred to use this production of a freshman student, for it indicates how far a youthful mind can go, provided it is given a logical start.

In conclusion let me assure my readers that by the above method in which the student is given a chance to construct something (and all students enjoy making something grow) that that veritable terror of alternation-of-generations in the land plants has lost his Stygian aspect; in fact the writer personally enjoys nothing more than directing working mentalities as they solve this problem for themselves.

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A STRANGE FRUIT

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Jarilla Sesseana (Ramirez) Rusby (*Mocinna heterophylla*, var. *Sesscana* Ramirez, *Anales Inst. Med. Nac.* 1: 207, t's 3-4 (1894); not *Mocinna* of Lagasca (1816), of Bentham (1839), nor of Cervantes (1885).

On a day in late summer, while traveling through the mountains of the Mexican table-land, near Empalma de Gonzales, one of my peons brought me a fruit of very curious form, calling it *Jarilla* (meaning "little jar") and stating that it was very good. Since he had separated it from its stem, I mistook its base for its summit, and was for a moment quite confused as to its morphology. About as large as a small canteloupe, and of an ovoid form, its elongated and thickened accrescent style looks not unlike a peduncle, this impression being strengthened by the appearance at the other end of five elongated and fleshy, curved appendages which could well be five ascending accrescent superior calyx-lobes, were it not for the fact that in reality they are basal, and recurved about the summit of an elongated peduncle, the stump of which I had mistaken for the style. These appendages are

confluent at their bases to form a rim, enclosing a large concavity, in the center of which the peduncle is attached. The fruit is one-celled, but the cavity is nearly filled (in the half-ripe state in which I saw it) with innumerable seeds a little like small cucumber seeds, originating from 5 placentae and borne on very long funiculi. The seeds have a fleshy outer covering that seems to be



The Jarilla (*Jarilli Sesseana* (Ramirez) Rusby). Copied after Ramirez
(*Ann. Inst. Med. Nac.*, 1, Lam. iv.)

a sort of aril, beneath which the surface is rugose. This covering, the fleshy funicles and the placentae, are said to be eaten. I could gain no adequate idea of the flavor or other edible qualities from the ignorant peon, but I found the anomalous form and structure of the fruit sufficiently interesting. The floral characters, and those of the plant itself, are not less so. The herbaceous, prostrate or reclining milky-juiced stems, approximating a yard in length, are produced from a large tuberous rhizome, and are hollow, fleshy and juicy. The leaves are alternate, smooth, glaucous beneath, somewhat triangulate, the margin varying from sinuate to 3-lobed, and palmately 3-5 nerved. Those of the female plant have a large light blotch on the upper surface. The small lilac or violet tubular flowers exhibit remarkable differences in the two sexes, the most striking of which is the alternation of the petals with the calyx-lobes in the pistillate flower, while they are anteposed in the staminate.

Since the plant appears never to have been described in English, an abridged translation of Ramirez' description is here given, in addition to the above notes.

Largest leaves with blade 5 or 6 cm. long, by 3.5 or 4 cm. wide, the petioles as long as the blade, nearly horizontal and cylindrical, with a branch and an inflorescence in each axil. Inflorescence a subdichotomous raceme in the male plant, solitary in the female.

Staminate Flowers.—Calyx very small, 5-fid, the lobes triangular, opposite those of the corolla, lightly rose-colored at the margin. Corolla light-purple, funnel-form, with variable prae-floration, the tube lightly narrowed upward and with a few hairs within, below the throat, the lobes oblong. Stamens 10, introrse, inserted in the throat, their summits all at the same level, the filaments united at the base, five of them very short and opposite the corolla-lobes, the alternate ones much longer, the anthers basifixed, those with short filaments longer, longitudinally dehiscent. The large connective forms a margin for the posterior surface and projects above, and is hairy. Rudimentary ovary filiform.

Pistillate Flowers.—Peduncle 4.5 cm. long, bearing two or three bracts. Calyx as in the staminate, but the lobes alternating

with the petals, which are oblong with a small dilatation at the base. Stamens none. Ovary ovoid, one-celled, five-lobed, bearing five fleshy accrescent prolongations at the base, alternate with the stigmas and lobes of the ovary, and opposite and covering the petals at the base. Placentae five, the numerous ovules inserted on long funicles. Style small, accrescent, the stigmas five, papillose, at first horizontal then ascending.

Berry one-celled, ellipsoidal, with the basal appendages and style accrescent, the former enclosing a basal concavity. Seeds numerous, rugose after the separation of the sarcotesta. Embryo straight. Cotyledons plane, the caulicle apparent and cylindrical. Endosperm abundant, peripheral. Funicles spongy, filling the cavity of the ovary. The fruit, when cut, exhales the odor of lemon and citron.

Flowers from June to September. The plant occurs at various places in Jallisco and Guanajuata.

The difference between this and *J. heterophylla* (*Mocinna heterophylla* Cerv. ex. La Llave) appear to me clearly specific.

REVIEWS

Sturtevant's Notes on Edible Plants*

When, six years previous to his death in 1893, Dr. E. Lewis Sturtevant, the distinguished first Director of the New York Agricultural Experiment Station at Geneva, retired to private life, he left at the Station a voluminous series of notes comprising a compilation of then-existing knowledge concerning the edible plants of the world. For twenty years this valuable manuscript, the work of nearly a quarter of a century on the part of Dr. Sturtevant, remained untouched. Now, thanks to the able efforts of Dr. Hedrick, Sturtevant's Notes are made available in what, without question, represents one of the most generally useful reports ever issued by a State Agricultural Experiment Station.

* Hedrick, U. P., Sturtevant's Notes on Edible Plants. Pp. vii + 686, Report New York Agricultural Experiment Station, 1919, Pt. II. Also Twenty-seventh Ann. Rep. New York State Dept. Agr., Albany, Vol. 2, Part 2, 1919.